

THE *CERACANTHIA* COMPLEX (LEPIDOPTERA: PYRALIDAE:
PHYCITINAE) IN COSTA RICA. II. *MEGARTHRIA* RAGONOT, *DRESCOMA*
DYAR, AND *LASCELINA* HEINRICH

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Abstract.—The genera *Megarthria* Ragonot, *Drescoma* Dyar, and *Lascelina* Heinrich are redescribed. *Amegarthria* Neunzig and Dow and *Megacerdresa* Neunzig are **newly synonymized** with *Megarthria* and *Lascelina*, respectively. One species of *Megarthria*, two species of *Drescoma*, and three species of *Lascelina* are recognized in Costa Rica. Two species are described as new: *Lascelina papillina* and *Lascelina pitilla*. *Megacerdresa cordobensis* Neunzig is given the **new combination** *Lascelina cordobensis* (Neunzig). *Megarthria cervicalis* Dyar is a **new junior synonym** of *Megarthria peterseni* (Zeller). Keys are provided for males of *Drescoma* and *Lascelina*. Habitus photographs of male adults, line drawings of most male antennae and male genitalia of all species, are included. Also figured are the female genitalia of four of the six species, the forewing and hindwing of *Drescoma cyrdipsa*, and the costa of the forewing of *Megarthria peterseni*.

Key Words: Phycitinae, taxonomy, Neotropical

This second paper treating the *Ceracanthia* complex, a common, mostly Neotropical group within the subfamily Phycitinae in Costa Rica, deals with the genera *Megarthria* Ragonot, *Drescoma* Dyar, and *Lascelina* Heinrich. In Part I (Neunzig and Solis 2002), we revised *Ceracanthia* Ragonot, the largest genus in the complex. Information relative to the contributions of early workers, an overview of the salient diagnostic features of members of the complex, and a key to genera can be found in Part I. Specimens studied for Part II came from the following sources: Instituto Nacional de Biodiversidad, Santo Domingo, Costa Rica (INBio); North Carolina State University Entomology Museum, Raleigh, N. C., U.S.A. (NCSU); National Museum

of Natural History, Smithsonian Institution, Washington, D. C., U.S.A. (USNM); The Natural History Museum, London, England (BMNH); and the collection of Vitor O. Becker, Brasilia, Brazil (VOB).

Megarthria Ragonot

Megarthria Ragonot 1893:156. Type species: *Myelois peterseni* Zeller 1881. Original designation.

Amegarthria Neunzig and Dow 1993:42. **New synonymy.** Type species: *Megarthria cervicalis* Dyar 1919, here considered a synonym of *Myelois peterseni* Zeller 1881. Original designation.

Note.—The genus *Amegarthria* was proposed by Neunzig and Dow (1993) because of major differences they found between

Megarthritis cervicalis Dyar and other species placed by Heinrich (1956) in his concept of *Megarthritis*. However, our present study, which included an examination of Zeller's types in the BMNH and a more thorough review of the literature, has shown that Heinrich misidentified the type species of Ragonot's *Megarthritis*. Heinrich erroneously selected a species belonging to the related genus *Ceracanthia* Ragonot (additional information regarding this *lapsus* by Heinrich is given herein under "Remarks" following the treatment of *Megarthritis peterseni*). The actual type species of *Megarthritis* is identical to the type species of *Ame-garthria*, and, therefore, *Ame-garthria* is a junior synonym of *Megarthritis*.

Description.—Antenna of male with scape large (about 3× as wide as width of base of shaft); shaft strongly bent outward near its attachment to scape forming a short, strongly curved sinus; sinus without spines marking its basal and upper limits; inner surface of sinus covered with appressed scales; very small triangular tuft of scales attached to posterior base of sinus; sensilla trichodea (cilia) of antenna abundant, about as long as width of shaft at mid-sinus. Antenna of female simple. Labial palpus of male upturned, extending above vertex; 3rd segment about as long as 2nd segment. Maxillary palpus of both sexes small, short scaled. Haustellum well developed. Ocellus present. Forewing of male with peculiar, small, hood-shaped, basal, costal prominence (Fig. 25), and associated costal fold; underside of wing with subcostal streak of brownish-red scales; forewing of both sexes smooth, with 11 veins; R₃₊₄ and R₅ stalked for about ½ their lengths, M₁ straight; M₂ and M₃ separate; CuA₁ arises from lower angle of cell; CuA₂ arising well before lower angle of cell. Hindwing with eight veins (1A, 2A, 3A together treated as one vein); Sc+R₁ and R_s fused for less than ½ their lengths beyond cell; CuA₁ short stalked to M₂ and M₃; CuA₂ arises from just before outer angle of cell; cell less than ½ length of wing. Male abdominal segment 8

with small tuft, consisting of broadly flattened and contorted scales (digitate pocket from sternite of segment 8 strongly bent and flattened). Male genitalia with uncus small relative to other genitalic structures; gnathos with weakly developed medial, hooklike element (fused with scaphium except for broadly swollen apex); transtilla present, consisting of a thin rectangular plate; juxta platelike with slender, seta-bearing lateral arms; valva broad, covered on inner surface with slender setae (without broadened spinelike setae on distal half); sacculus with apex a small, slender hooked, fingerlike process lying above a broad squared-off element, base of sacculus with three pair of ventral scale tufts (largest pair consisting of broad, tightly-coiled scales); aedoeagus long and slender, vesica of aedoeagus with small, semi-oval, sclerotized plate and patch of microspines; vinculum broad (about as long as greatest width) and evenly rounded posteriorly. Female genitalia with ductus bursae long, slender, twisted, with microspines within lower ½; corpus bursae short, oval, slightly less than ½ as long as ductus bursae; microspines, similar to those in ductus bursae, extending for a short distance into corpus bursae; ductus seminalis attached to corpus bursae near junction of ductus bursae and corpus bursae.

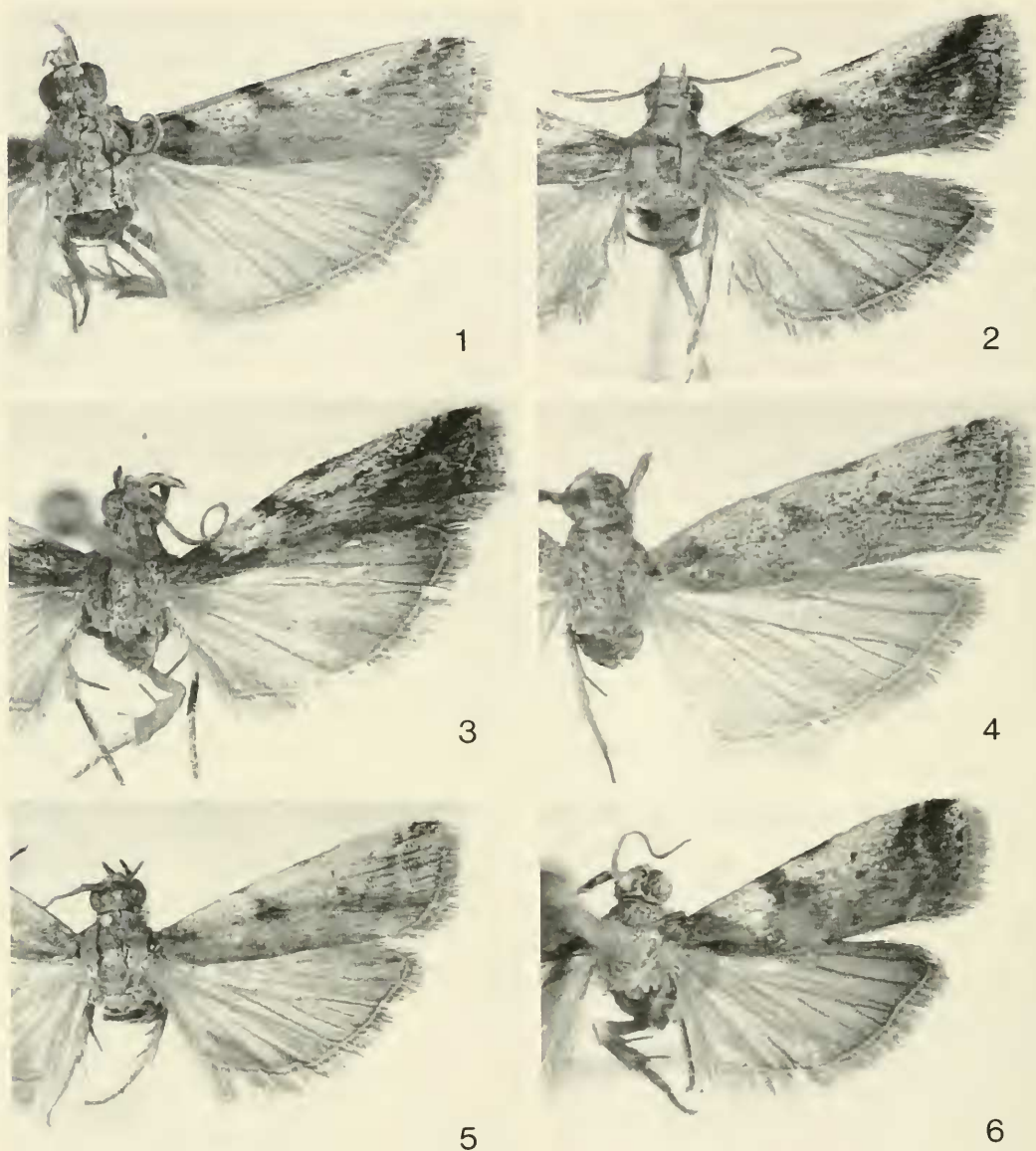
Megarthritis peterseni (Zeller)
(Figs. 1, 7, 12–13, 25–26)

Myelois peterseni Zeller 1881:198.

Megarthritis cervicalis Dyar 1919:42. **New synonymy.**

Megarthritis beta Heinrich 1956:88.

Identifying features can be seen easily in the unusual male antenna (Fig. 7) (in which the shaft is strongly bent outwardly near its attachment to a large, broad scape), the peculiar, small hood-shaped, costal prominence at the base of the forewing (Fig. 25), the coiled scales at the base of the sacculus (Fig. 12), and the twisted, long (about 2× length of corpus bursae) ductus bursae (Fig.



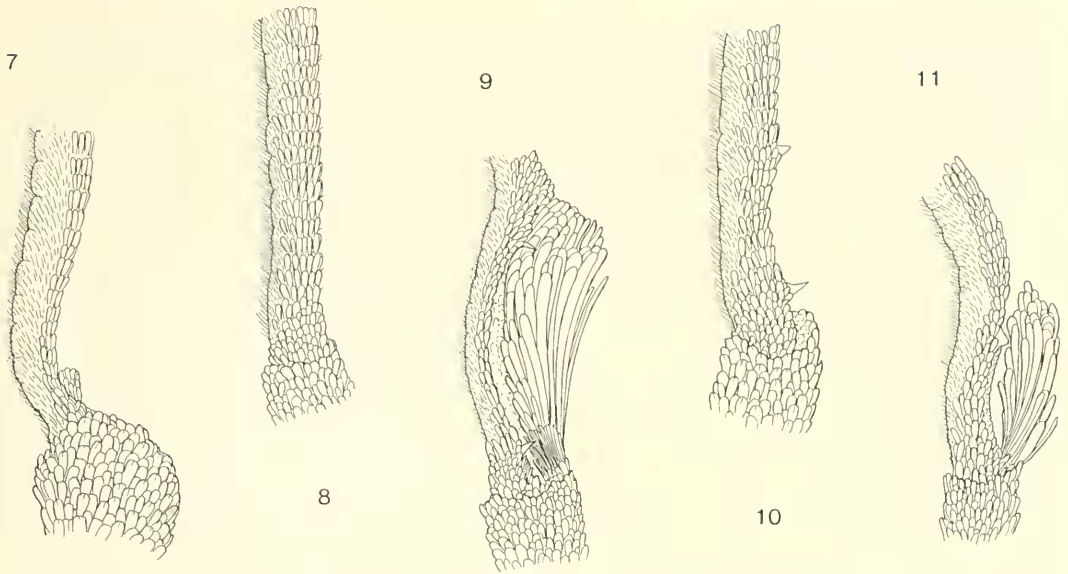
Figs. 1-6. Males, dorsal view. 1, *Megarthria peterseni*. 2, *Drescoma cyrdipsa*. 3, *Drescoma cinilixa*. 4, *Lascelina cordobensis*. 5, *L. pitilla*. 6, *L. papillina*.

26). Additional diagnostic features are included under the description of the genus.

Costa Rican material examined.—San José, (no date on label), H. Schmidt (1 ♀); Rancho Quemado, 200 m., Peninsula de Osa, Provincia Puntarenas, October, 1992, F. Quesada, INBio CR I000945014 (1 ♂).

Other material examined.—Cuba, Tana-

mo, August (1 ♂; holotype of *Megarthria cervicalis* Dyar in USNM); Mexico, Jalapa, (no date on label), W. Schaus (1 ♀), Orizaba, March (no year on label), R. Muller (1 ♀; holotype of *Megarthria beta* Heinrich in USNM); Belize, 1000 Foot Falls, Mountain Pine Ridge, May, June, 1990, L. C. Dow (4 ♂, 3 ♀); Guatemala, February,



Figs. 7–11. Basal part of right male antenna, frontal view. 7. *Megarhria peterseni*. 8. *Drescoma cyrdipsa*. 9. *Lascelina cordobensis*. 10. *L. pitilla*. 11. *L. papillina*.

May, October. W. Schaus & W. Barnes (1 ♂, 2 ♀); Panama, Porto Bello, May, 1912. A. Busck (2 ♀), Las Cumbres, 1971. M. Daykin (1 ♂); Columbia, Honda, (no date on label). Petersen (1 ♂; lectotype of *Myelois peterseni* Zeller in BMNH); Trinidad, Caparo, (no date on label). F. Birch (1 ♀); Brazil, Rondônia, Porto Velho, April, May, 1989. V. O. Becker (1 ♂, 1 ♀).

Remarks.—Heinrich (1956), apparently, did not look at the syntypes of *Myelois peterseni*. He stated “I have seen no specimens from Colombia” (the type locality). He, also, did not carefully read the description of *peterseni* in Ragonot’s 1893 publication. Heinrich’s description and figures purported to be *Megarhria peterseni* are of a species described as new in the genus *Ceracanthia* in our Part I (Neunzig and Solis 2002). Particularly unfortunate was Heinrich’s erroneous statement in reference to the specimens upon which he based his description and figures, that “the males before me . . . agree in antennal characters with the type of *peterseni* as described by Ragonot.” Heinrich described, and his figure 279 illustrated, a male antenna with

prominent spines associated with a sinus in the shaft. In actuality, no mention was made by Ragonot (1893) of a spined sinus. Ragonot stated that the distinctive feature of *peterseni* is the large scape that is swollen distally (“. . . l’article basilaire, qui est long, très gros, dilaté au sommet.” (pp. 156–157)). Indeed, Ragonot based his genus name, *Megarhria* (large-joint) on this feature of the scape.

It also should be pointed out that the original description of *peterseni* by Zeller (1881) did not mention spines on the antenna, although he included similar features in his 1881 descriptions of the antennae of other new species having these structures. In addition, Zeller’s fig. 20 of the forewing of *peterseni* agrees more closely with Fig. 1 of the present paper than with fig. 2 in Part I of our study.

HHN has examined Zeller’s syntypes of *Myelois peterseni* in the BMNH. There are two males and five females each with a green label on which is written “*Myelois peterseni* Z. Honda pet.” and a white label with “Zell. Coll. 1884.” A male that agrees with Zeller’s and Ragonot’s description is

here selected as lectotype in order to fix the identity of *Megarathria peterseni*. A red label with "LECTOTYPE peterseni Zeller, Neunzig and Solis" has been added to this specimen. Zeller's other male syntype in the BMNH is a specimen of *Drescoma cyrdipsa* Dyar.

The holotype of *Megarathria cervicalis* Dyar in the USNM is the same species as the newly designated lectotype of *Myelois peterseni* Zeller, and, therefore, *Megarathria cervicalis* has been made a junior synonym of *Megarathria peterseni*. *Megarathria beta* Heinrich was synonymized with *cervicalis* by Neunzig and Dow in 1993.

Drescoma Dyar

Drescoma Dyar 1914:328. Type species: *Drescoma cyrdipsa* Dyar 1914. Original designation.

Description.—Antenna of male simple (with slender scape and without sinus, spines, and/or scale tufts); sensilla trichodea (cilia) abundant, about $\frac{1}{3}$ as long as width of shaft near base. Antenna of female simple. Labial palpus of male upturned, reaching above vertex, 3rd segment almost as long as 2nd segment. Maxillary palpus small, short-scaled. Haustellum well developed. Ocellus present. Forewing of male with costal concavity in basal half of wing; forewing of both sexes smooth, with 11 veins; R_{3+4} stalked for over $\frac{1}{2}$ their length; M_1 straight; M_2 and M_3 separate; CuA_1 arises from lower angle of cell; CuA_2 arising before lower angle of cell. Hindwing of male with costal concavity in basal $\frac{1}{2}$ of wing; underside with subcostal patches or streaks of contrastingly colored scales and with anal fold and associated scale pencil; hindwing of both sexes with eight veins (1A, 2A, and 3A together treated as one vein); $Sc+R_1$ and R_s fused for less than $\frac{1}{2}$ their lengths beyond cell; M_1 slightly concave; stalk of $Sc+R_1+R_s+M_1$ angularly bent just beyond base; M_2 and M_3 fused for over $\frac{1}{2}$ their lengths beyond cell; CuA_1 short stalked to M_2 and M_3 ; CuA_2 arises

from lower angle of cell; cell about $\frac{1}{3}$ length of wing. Male abdominal segment 8 without tuft (digitate pocket from sternite of segment 8 simple). Male genitalia with uncus broadly rounded apically; gnathos with distomedial elements developed into a rod-like structure; transtilla present, consisting of wide, very shallow U-shaped structure; juxta small, platelike with short, setae-bearing arms; valva moderately broad, covered on inner surface with slender setae (*cyrdipsa*), or covered on inner surface, in part, with broadened, spinelike setae and, in part, with slender setae (*cinilixa*); outer surface of valva with long, black, weakly-attached scales that sometimes obscure some features of inner valva; sacculus with apex a pointed process; base of sacculus with an extended lateral arm bearing either a large, long scale tuft (*cyrdipsa*), or bearing a large, long scale tuft and a much smaller, short scale tuft (*cinilixa*); aedeagus slender; vesica with elongate patch of microspines, and a folded, in part sclerotized, platelike element; vinculum slender, constricted medially, with well-developed, posteriorly directed, lateral arms at anterior end. Female genitalia (of *cyrdipsa*) (Fig. 28) with ductus bursae shorter than corpus bursae and with cluster of small spines at its distal end; corpus bursae with scobinate patch and large hooked spine (spine, in general, laterally directed and extending across about $\frac{1}{2}$ width of corpus bursae).

KEY TO SPECIES OF MALE *DRESCOMA*

(A key including females is not possible because females of *cinilixa* remain unknown.)

1. Underside of hindwing with subcostal, rough patch of pale brown, semi-metallic scales, followed by group of yellow scales and a linear cluster of short, slender, black scales; sacculus of genitalia with apical part rounded (Fig. 14)
 - *cyrdipsa* Dyar
- Underside of hindwing with subcostal, smooth patch of mostly whitish-yellow scales, followed by streak of black and streak of reddish

brown scales; sacculus of genitalia with apical part slender and sharply pointed (Fig. 16) . . .
 *cinilixa* Dyar

Drescoma cyrdipsa Dyar
 (Figs. 2, 8, 14–15, 24, 28)

Drescoma cinilixa Dyar 1914:329

This is an easily recognized species. Both the forewing and hindwing of the male have obvious costal notches (the vein below the notch in the hindwing is, also, noticeably angled) (Fig. 24). Also, on the underside of the male hindwing there is a pale, rough, brownish, semi-metallic, subcostal patch of scales near the base of the wing, followed by a group of small, yellowish scales and a linear cluster of short, slender, black scales. In addition near these contrasting scales, between the stalk of Sc+R and the stalk of Cu+A is found a well-developed patch of black scales. Furthermore, a pale brown scale pencil, within a short yellowish-white fold, is present on the anal margin of the hindwing.

The male genitalia (Figs. 14–15) have a well-developed transtilla with lateral arms that are distinctly broadened, and the apical part of the sacculus is rounded; the female genitalia (Fig. 28) have a large hooklike spine in the corpus bursae that extends about ½ the distance across the width of the corpus bursae.

Costa Rican material examined.—Estacion Sirena, Parque Nacional Corcovado, Provincia Puntarenas, May–July, 1992, G. Fonseca, INBio CRI001741662, INBio CR I000708220 (1 ♂, 1 ♀); Cerro Tortuguero, 0–120 m. Parque Nacional Tortuguero, Provincia Limon, May, 1991, J. Solano, INBio CRI001398617 (1 ♂).

Other material examined.—Mexico, Chiapas, May, 1915, R. Muller (1 ♀); Belize, San Ignacio, May, 1990, L. C. Dow (1 ♂), 1000 Foot Falls, Mountain Pine Ridge, June 1990, L. C. Dow (1 ♂); Guatemala, Cayuga, January, May, June, August, (no year on label), W. Schaus & W. Barnes (2 ♂, 2 ♀); Panama, Cabima, May, 1911, A. Busck (1 ♂), Corozal, February and No-

vember, 1911, A. Busck (1 ♂, 1 ♀), La Chorrera, April and May, 1911, A. Busck (1 ♂, 1 ♀; syntypes of *Drescoma cyrdipsa* in USNM), Rio Trinidad, March 1912, A. Busck (2 ♂, 1 ♀), Taberilla, (no date on label), (1 ♀); French Guiana, St. Jean Maroni, (no date on label), (1 ♀); Brazil, Pipa, March, 1994, V. O. Becker (1 ♂).

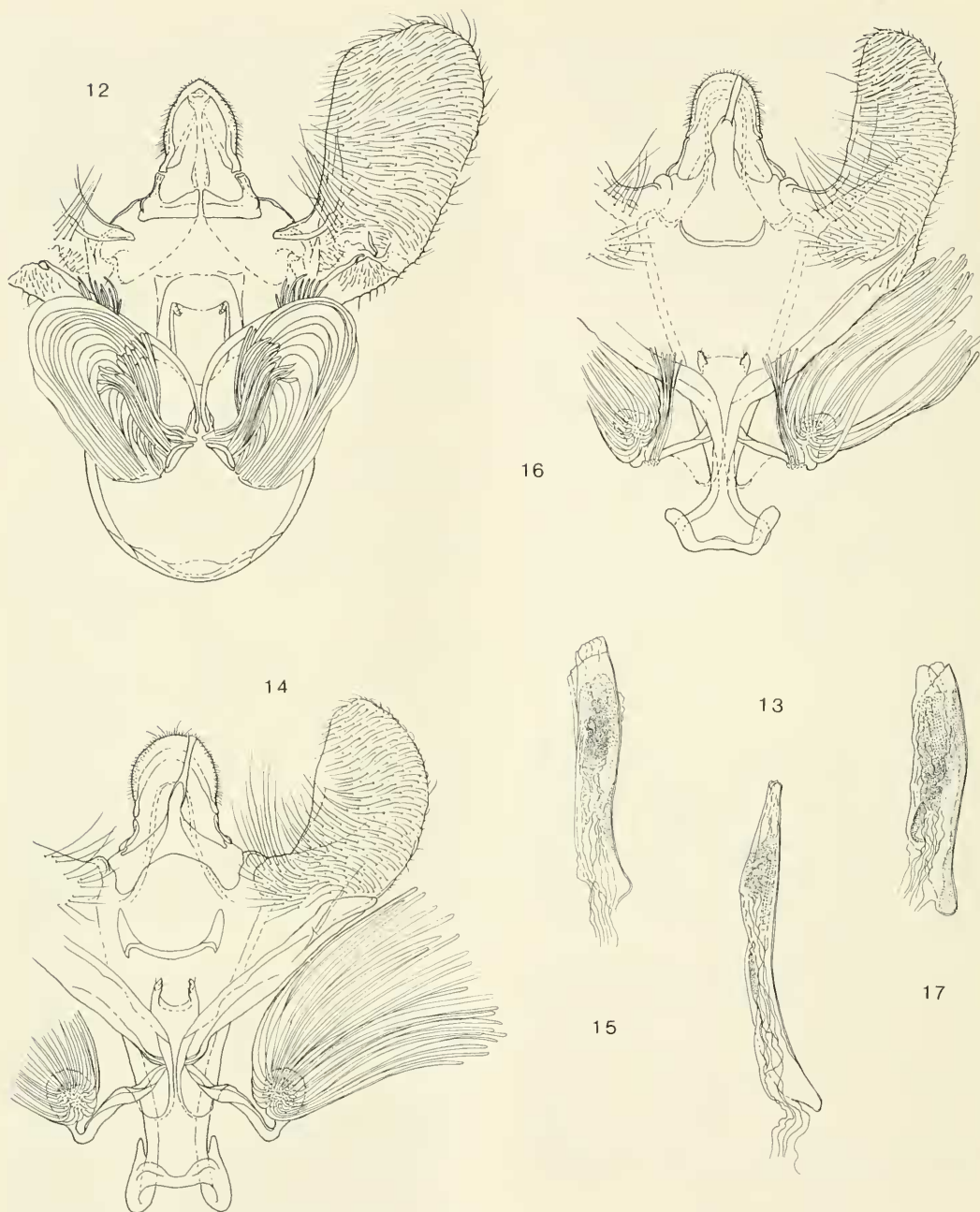
Drescoma cinilixa Dyar
 (Figs. 3, 16–17)

Drescoma cinilixa Dyar 1914:329

Drescoma cinilixa is closely related to *Drescoma cyrdipsa*. This relationship is particularly apparent in males of both species, each with the costa of the forewing and hindwing strongly notched. Nevertheless, the two can be distinguished by the underside of the male hindwing. *Drescoma cinilixa* has the wing with a smooth, subcostal, basal patch of mostly whitish-yellow scales (in some specimens the patch has a few brown scales), followed distally by a streak of black and a streak of reddish-brown scales. There is only a small black patch of scales, or no black patch, between the stalk of Sc+R and the stalk of Cu+A. A partially black fold on the anal margin of the hindwing encloses a short, black scale pencil.

The male genitalia (Fig. 16) include a transtilla that is much thinner than that of *Drescoma cyrdipsa*. The sacculus at its apical end is slender and sharply pointed, and at its base bears both a large scaled tuft and a secondary, small tuft of scales. We have not been able to associate the sexes of *Drescoma cinilixa*; consequently, the female genitalia are unknown.

Costa Rican material examined.—Estacion Los Almendros, Provincia Guanacaste, 300 m., 4–12 September, 1994, E. Lopez, INBio CR I002019761 (1 ♂); Acosa, Estacion Sirena, Provincia Puntarenas, 6–12 April, 1995, A. Picardo, INBio CR I002196747 (1 ♂).

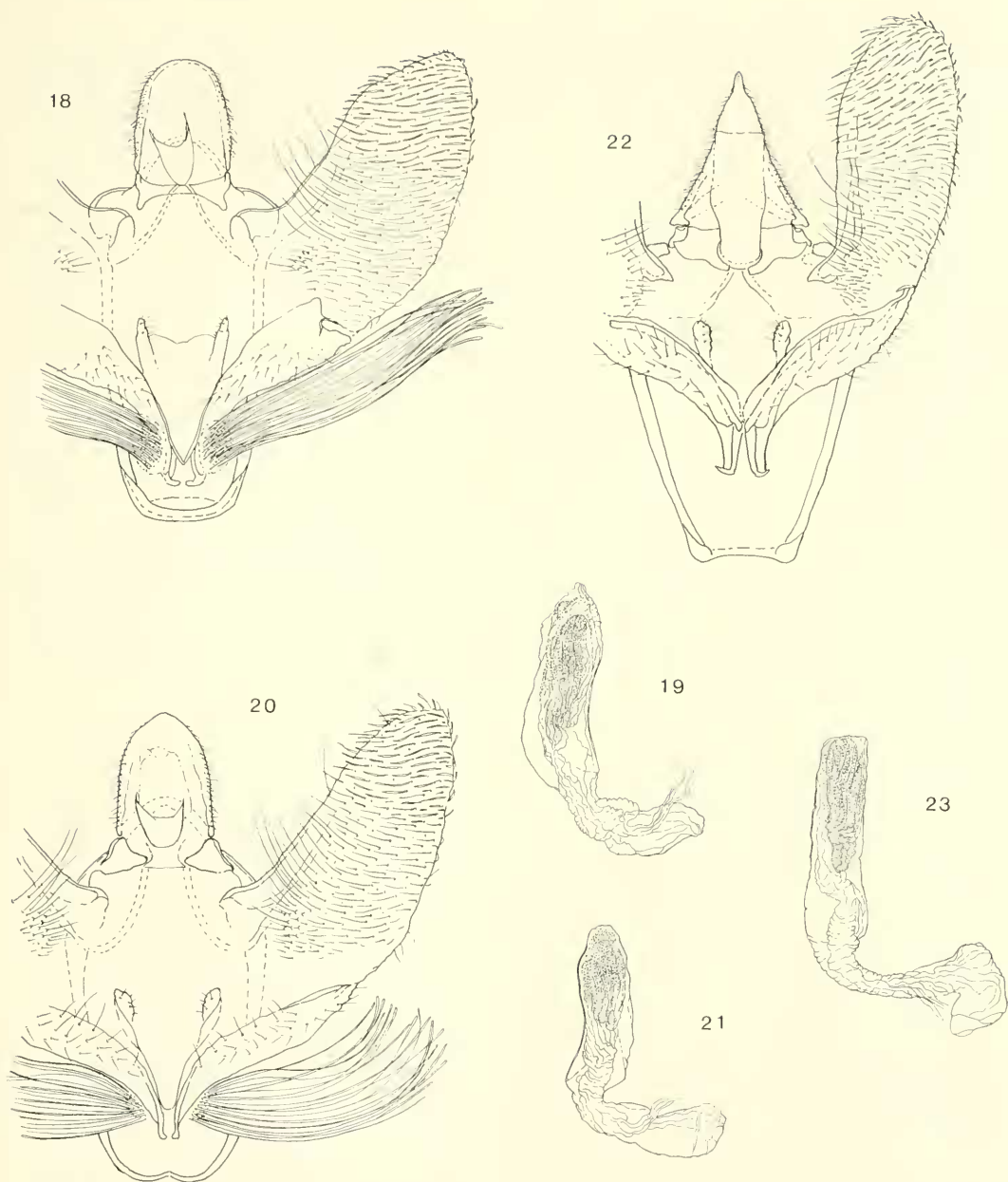


Figs. 12-17. Male genitalia, ventral view. 12, *Megarthria peterseni* (aedeagus omitted). 13, *M. peterseni*, aedeagus. 14, *Drescoma cyrdipsa* (aedeagus omitted). 15, *D. cyrdipsa*, aedeagus. 16, *D. cimilixa* (aedeagus omitted). 17, *D. cimilixa*, aedeagus.

Other material examined.—Guatemala, Cayuga. May (no year on label), W. Shaus & W. Barnes (1 ♂); Panama, La Chorrera, May, 1912, A. Busck (1 ♂; type in USNM).

Lascelina Heinrich

Lascelina Heinrich 1956:264. Type species: *Lascelina canens* Heinrich 1956. Original designation.



Figs. 18–23. Male genitalia, ventral view. 18, *Lascelina cordobensis* (aedoeagus omitted). 19, *L. cordobensis*, aedoeagus. 20, *L. pitilla* (aedoeagus omitted). 21, *L. pitilla* aedoeagus. 22, *L. papillina* (aedoeagus omitted). 23, *L. papillina* aedoeagus.

Megacerdresa Neunzig 1994:360. **New synonymy.** Type species: *Megacerdresa cordobensis* Neunzig 1994. Original designation.

Note.—*Lascelina* was rejected by Neunzig in 1994 as a place to include *cordob-*

ensis, and a new genus, *Megacerdresa*, was proposed, chiefly because Heinrich's concept of the group did not contain species with more than seven veins in the hindwing (*cordobensis* has eight). The study of many recently available members of the complex

in Costa Rica and the description by Neunzig (1996) of a new species of *Lascelina* in the Dominican Republic reveals significant similarities in the male genitalia. Thus we synonymize *Megacerdresa* and *Lascelina* despite differences in venation.

Description.—Antenna of male with scape cylindrical, swollen apically; shaft with distinct sinus at base; basal and distal ends of sinus each with a small spine, or low, stout spinelike element; inner surface of sinus covered with appressed setae; sinus with or without brush or tuft of scales attached to posterior base; sensilla trichodea (cilia) of antenna about 1/3 as long as width of shaft at midsinus. Antenna of female simple. Labial palpus of male upturned, reaching above vertex, 3rd segment about as long as 2nd segment. Maxillary palpus of both sexes small, short scaled. Haustellum well developed. Ocellus present. Forewing of male simple, underside with dark subcostal patch or streak in some species. Forewing of both sexes smooth, with 11 veins; R₃₊₄ and R₅ stalked for about 1/2 or slightly over 1/2 their lengths; M₁ slightly bowed; M₂ and M₃ close, but separated at base, or shortly stalked; CuA₁ arises from lower angle of cell; CuA₂ arising well before lower angle of cell. Hindwing underside, in some species, with dark patch or streak; with seven to eight veins (1A, 2A, 3A together treated as one vein); Sc+R₁ and Rs fused for about 1/2 their lengths beyond cell; M₁ straight; M₂ and M₃ fused for about 1/2 their lengths or completely fused; CuA₁ briefly fused with stalk of M₂ and M₃, or stalked for about 1/2 its length with fused M₂₊₃; CuA₂ arises from just before lower angle of cell, or from lower angle of cell; cell distinctly less than 1/2 length of wing. Male abdominal segment 8 with small tuft, consisting of rather straight, simple short scales (within pocket of sternite of abdominal segment 8). Male genitalia with uncus broadly rounded, truncated, slightly pointed, or nipple-like distally; gnathos apically completely fused to wall of scaphium (without apical hook or rodlike element);

transtilla absent; juxta a plate with short, lateral, setiferous arms; valva moderately broad, covered on distal half of inner surface with broadened spinelike setae; sacculus with apex usually with posteriorly projecting lobe; base of sacculus with or without moderately large, ventral scale tuft (all species without small secondary scale tuft); aedeagus robust, with bent, supplemental, basal appendage; vesica with patch of microspines and two sclerotized plates; vinculum broad, without constriction, about as long as greatest width. Female genitalia (*cordobensis*, *canens*, *pitilla*) with ductus bursae shorter than corpus bursae, slightly twisted, usually with a few scobinations near ostium bursae, and a dense, elongate, medial patch of many microspines and numerous sclerotized, irregular ridges near junction with corpus bursae; corpus bursae membranous, with curved denticulate spine, originating from near wall of corpus and directed mostly anteriorly.

KEY TO SPECIES OF MALE *LASCELINA*

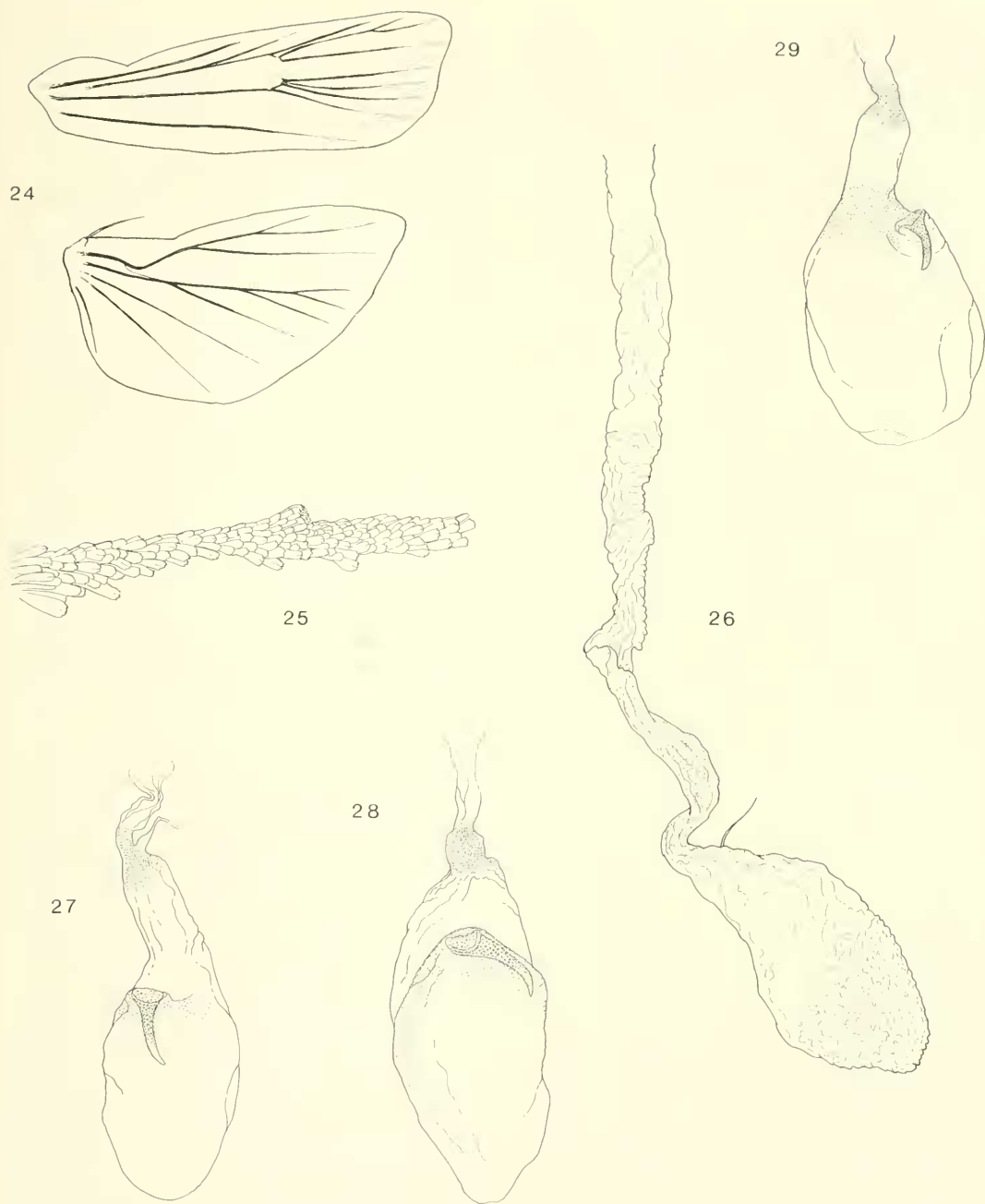
(A key including both sexes is not possible because the female of *papillina* is unknown.)

- 1. Enlarged base of antennal shaft surrounding sinus dark; apex of uncus broadly rounded (Fig. 18) *cordobensis* (Neunzig)
- Enlarged base of antennal shaft surrounding sinus pale; apex of uncus slightly pointed (Fig. 20) or nipplelike (Fig. 22) 2
- 2. Antenna without scale tuft associated with sinus (Fig. 10); apex of uncus slightly pointed (Fig. 20) *pitilla* Neunzig and Solis, n. sp.
- Antenna with scale tuft associated with sinus (Fig. 11); apex of uncus nipple-like (Fig. 22) *papillina* Neunzig and Solis, n. sp.

Lascelina cordobensis (Neunzig),
new combination
 (Figs. 4, 9, 18–19, 27)

Megacerdresa cordobensis Neunzig 1994: 362.

The male of *Lascelina cordobensis* can be identified using a combination of features. These are found mainly in the genitalia and include a broadly rounded apex of



Figs. 24–29. Venation of male right forewing and hindwing, dorsal view, hoodlike prominence on male right wing, dorsal view, and female genitalia, anterior part, ventral view, 24, *Drescoma cyrdipsa*. 25–26 *Megarthria peterseni*. 27, *Lascelina cordobensis*. 28, *Drescoma cyrdipsa*. 29, *L. pitilla*.

the uncus, a complete absence of a rodlike median distal hook on the gnathos, and a valva with its distal margin angulate (Fig. 18). Useful for a tentative identification is

the easily seen dark color of the enlarged base of the shaft of the male antenna that surrounds the sinus.

Costa Rican material examined.—Esta-

cion La Casona, 1,520 m. Reserva Biologica Monteverde, Provincia Puntarenas, September, 1992, N. Obando, INBio CR 1000947024 (1 ♂); Cerro Tortuguero, Parque Nacional Tortuguero, 0–100 m., Provincia Limon, March, May, 1991, J. Solano, INBio CR 1001399037, INBio CR 1000197451 (1 ♂, 1 ♀).

Other material examined.—Mexico, Cordoba, August–December, 1966, A. B. Lau (10 ♂, 13 ♀; holotype ♂ in USNM).

Lascelina pitilla Neunzig and Solis,
new species

(Figs. 5, 10, 20–21, 29)

Diagnosis.—The external habitus of *pitilla* together with the general appearance of its male genitalia clearly show that *pitilla* belongs to the genus *Lascelina* (Figs. 20–21). The male antenna will distinguish it from its congeners. Other species in the genus have an obvious scale tuft associated with the sinus of the shaft; this feature is absent in *pitilla* (Fig. 10).

Description.—Forewing length 6.0–7.5 mm. Head with frons white medially, pale reddish brown near eyes; vertex pale reddish brown, darker anteriorly; labial palpus outwardly with basal segment mostly white, with some pale reddish brown, 2nd and 3rd segments mostly brown with reddish brown distally; maxillary palpus simple, mostly pale reddish brown with a few dark brown scales basally; antenna of male with sinus in base of shaft; distal and basal end of sinus with small, sharply pointed, medially directed spine; inner surface of sinus covered with appressed scales; no scale brush or tuft attached to posterior base of sinus. Forewing of male simple without costal fold, costal concavity or sex-scaling; wing above mostly white on costal half and pale brown, reddish brown, brown, and red on posterior half; base brown, suffused with red; a pair of mostly red to reddish-brown diagonally converging bands extend from costa to fuse with brown and red of posterior half of wing; bands divide costal half of wing into three contrasting, mostly white

patches (band that starts $\frac{1}{3}$ from base of costa incomplete; distal band with weak margins); most distal white patch very small; middle white patch with small isolated, elongate red patch at about midcosta, and with pair of red and black discal spots; postmedial line vague, whitish. Hindwing simple, pale brown, darker along margins. Male genitalia (Figs. 20–21), with uncus slightly pointed distally; apical part of gnathos fused to scaphium; transtilla absent; juxta a thin plate with rounded, setiferous, lateral arms; valva slightly pointed apically; inner base of valva with cluster of setae arising from protuberances; sacculus with ventral tuft of thin scales (tuft reaches to about apex of sacculus); aedeagus robust, with angled basal supplement; vesica with patch of microspines, and two apically rounded, sclerotized plates; vinculum short, not medially constricted. Female genitalia (Fig. 29) with ductus bursae shorter than corpus bursae and with patch of microspines distally; corpus bursae with curved, scobinate spine.

Types.—Holotype: ♂. Est. Pitilla, 700 m., 9 km. S. Sta. Cecilia, P. N. Guanacaste, Prov. Guanacaste, Costa Rica, 27 jul. a 14 ago. 1992, C. Moraga, L-N 330200, 380200, INBio CR 1000393816, genitalia slide 393816 MC (INBio). Paratypes: Same collection label data as holotype except collector P. Rios, INBio CR I000867296, genitalia slide 4547 HHN (NCSU) (1 ♂); Est. Pitilla, 9 km. S. Sta. Cecilia, Prov. Guan., Costa Rica, 700 m., 18–23 Jul. 1993, P. Rios, L N 330200 380200, INBio CR 1001767419, genitalia slide 4546 HHN (INBio) (1 ♂); Est. Pitilla, 700 m. 9 km. S. Sta. Cecilia, Prov. Guan., Costa Rica, C. Moraga, Apr. 1991, L N 330200 380200, INBio CR 1000617183, genitalia slide 617183 MC (INBio) (1 ♀); Est. Pitilla, 700 m., 9 km. S. Sta. Cecilia, Prov. Guan., Costa Rica, P. Rios, Jul. 1991, L N 330200, 380200, INBio CR 1000346701, genitalia slide 4548 HHN (INBio) (1 ♀).

Etymology.—The specific epithet is based on the type locality, Estacion Pitilla,

located in the Guanacaste National Park, Costa Rica.

Lascelina papillina Neunzig and Solis,
new species

(Figs. 6, 11, 22–23)

Diagnosis.—The best diagnostic feature of *Lascelina papillina* is the triangularly-shaped uncus with its distal, nipple-like protuberance (Fig. 22). *Lascelina pedernalensis*, which occurs in the Dominican Republic, has a similar uncus, but its distal protuberance is less strongly developed (see fig. 53 of Neunzig 1996).

Description.—Forewing length 7.0 mm. Head with frons and vertex brownish white; labial palpus outwardly with basal segment white, whitish brown, and brown, 2nd and 3rd segments whitish brown, in part suffused with dark brown; maxillary palpus simple, whitish brown; antenna of male with well-developed sinus at base of shaft; basal and distal ends of sinus with low, stout, spinelike elements; inner surface of sinus covered with appressed scales; tuft of pale brown and brown scales attached to posterior base of sinus (tuft extends slightly beyond distal end of sinus). Forewing of male simple (without costal fold, costal notch, or contrastingly colored sex-scales); wing above mostly white on costal half and brown, reddish brown, and red on posterior half; base dark brown; a pair of black diagonally converging bands extend from costa to fuse with brown, reddish brown, and red of posterior half of wing (distal band broad, somewhat diffuse with indistinct margins); black bands divide costal half of wing into three contrasting, mostly white, patches (most distal patch very small); middle patch with small, isolated, elongate black patch at about midcosta, and with two black distal spots; a sprinkling of red scales chiefly on white patches; post-medial line apparent, whitish, but weakly developed. Hindwing simple, pale brown, darker brown along margins. Male genitalia (Figs. 22–23) with uncus distinctly triangular, with a well-developed, nipple-like

apex; apical part of gnathos fused to scaphium; transtilla absent; juxta a thin plate with rounded, setiferous, lateral arms; valva rounded apically; inner base of valva with broad, slightly elevated, moundlike, setiferous elements; sacculus with apex rather simple, with small, slender lobe; base of sacculus without ventral tuft of scales; aedeagus robust, with angled basal supplement; vesica with patch of microspines and two sclerotized plates; vinculum about as long as greatest width, truncated distally. Female genitalia unknown.

Type.—Holotype: ♂. Rancho Quemado, Peninsula de Osa, 200 m., Prov. Puntarenas, Costa Rica, F. Quesada, Dec. 1991, L-S-292500, 511000, INBio CR 1000345866, genitalia slide 345866 MC (INBio).

Etymology.—The specific epithet is derived from *papilla*, Latin for nipple, and refers to the appearance of the distal part of the uncus.

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